

ABSTRACT OF THE DISCLOSURE

Sub B'

An autofocus apparatus includes a photographing optical system having at least a focus adjusting lens disposed movably and an optical element for splitting light beams inputted and emerging from an object. The apparatus also includes a first focusing estimating device having a first optical system for forming an image corresponding to the object by inputting one light beam of the light beams split by the optical element, a first imaging element for picking up the image obtained by the first optical system and converting it into an electric signal, and a first data creating device for selecting a proper frequency component from the electric signal obtained by the first imaging element and, on the basis of a level of this frequency component, creating an item of data for focusing the image on the first imaging element upon the object. The apparatus further includes a second focusing estimating device having a second optical system for forming an image corresponding to the object by inputting the other light beam of the light beams split by the optical system, an image re-forming optical system for respectively re-forming, into images, the light beams passing through portions with different pupils among the light beams for forming the image formed by the second optical system, a second imaging element for picking up the images obtained by

the image re-forming optical system, and a second data  
creating device for creating an item of data for  
focusing the image on the first imaging element upon  
the object on the basis of a positional deviation  
5 between the images on the second imaging element. The  
apparatus includes also a focusing estimation selecting  
device for selecting at least one item of data out of  
the data given from the first focusing estimating  
device and the data from the second focusing estimating  
10 device, and a moving device for moving the focus  
adjusting lens on the basis of the data selected by the  
focusing estimation selecting device.